REMARKS

Upon entry of the instant Response and Amendment, Claims 1, 2 and 4-13 will remain pending in this application.

In the Office Action mailed April 4, 2007, Claims 1-10 are rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 5,840,778 issued to Althausen et al. Claims 1-10 are rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 5,643,970 issued to Sulzbach et al. Claims 1-10 are rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 6,019,919 issued to Sulzbach et al. Claim 10 is rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 3,220,801 issued to Rill, Jr. et al. Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over Claims 19-36 of copending application Serial No. 10/311,394.

Rejections under 35 U.S.C. §102(b) as anticipated by Althausen et al.

Claims 1-10 stand rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 5,840,778 issued to Althausen et al. Claim 3 has been cancelled, thus obviating any grounds for rejection based upon that claim. At page 2 of the instant Office Action, the Examiner states,

> Althausen et al. discloses methods for preparing polyurethane foams by mixing and metering into a mixing chamber area and reacting materials including polyol, isocyanate, carbon dioxide and water wherein the process includes generating bubble nuclei due to pressure reduction in the direction of the downstream flow by a body reading on the throttle body as claimed, and application of the material to a surface utilizing pressure conditions, mixers, and pressure-reduction bodies in order to arrive at processes and apparatuses reading on those claimed by applicants (see the entire document).

Applicants respectfully disagree with the Examiner's contention regarding Althausen et al. and remind the Examiner that as stated in MPEP §2131, to anticipate a claim, a reference must teach every element of that claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir.

1987). "The identical invention must be shown in as complete detail as is contained in the ...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Applicants respectfully contend that Althausen et al. fail to do so.

Althausen et al. disclose a process and an apparatus for producing polyurethane foam wherein the polyurethane reaction mixture is passed through an opening extending over a length of at least 1mm in the direction of flow, thereby subjected the mixture to shear. The polyurethane reaction mixture is also passed through a sieve (see Claim 1). Thus, Althausen et al. fail to teach or suggest the instantly claimed process, in which the polyurethane reaction mixture is passed through a pressure reduction body and through an adjustable throttle body. Althausen et al. also fail to teach or suggest mixing the reactive components in a static mixer.

Therefore, Applicants respectfully request the Examiner reconsider and reverse his rejection of Claims 1, 2 and 4-10 under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 5,840,778 issued to Althausen et al.

Rejections under 35 U.S.C. §102(b) as anticipated by Sulzbach et al. '970

Claims 1-10 stand rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 5,643,970 issued to Sulzbach et al. Claim 3 has been cancelled, thus obviating any grounds for rejection based upon that claim. At page 2 of the instant Office Action, the Examiner states,

> Sulzbach et al. discloses methods for preparing polyurethane foams by mixing and metering into a mixing chamber area and reacting materials including polyol, isocyanate, carbon dioxide and water wherein the process includes generating bubble nuclei due to pressure reduction in the direction of the downstream flow by a body reading on the throttle body as claimed, and application of the material to a surface utilizing pressure conditions, mixers, and pressure-reduction bodies in order to arrive at processes and apparatuses reading on those claimed by applicants (see the entire document).

Applicants respectfully disagree with the Examiner's contention regarding Sulzbach et al. '970. Sulzbach et al. '970 disclose a process and an apparatus for producing a polyurethane foam in which, the polyurethane reaction mixture is

passed through a flow channel, thereby subjected the mixture to shear. The polyurethane reaction mixture issuing from the flow channel passes through a means for reducing velocity, such as for example a deflecting surface or sieves (col. 4, lines 42-48). Sulzbach et al. '970, like Althausen et al., fail to teach or suggest a process or an apparatus as instantly claimed, in which, the polyurethane reaction mixture is passed through a pressure reduction body and then through an adjustable throttle body. Sulzbach et al. '970 also fail to teach or suggest mixing the reactive components in a static mixer.

Therefore, Applicants respectfully request the Examiner reconsider and reverse his rejection of Claims 1, 2 and 4-10 under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 5,643,970 issued to Sulzbach et al.

Rejections under 35 U.S.C. §102(b) as anticipated by Sulzbach et al. '919

Claims 1-10 stand rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 6,019,919 issued to Sulzbach et al. Claim 3 has been cancelled, thus obviating any grounds for rejection based upon that claim. At page 3 of the instant Office Action, the Examiner states,

> Sulzbach et al. discloses methods for preparing polyurethane foams by mixing and metering into a mixing chamber area and reacting materials including polyol, isocyanate, carbon dioxide and water wherein the process includes generating bubble nuclei due to pressure reduction in the direction of the downstream flow by a body reading on the throttle body as claimed, and application of the material to a surface utilizing pressure conditions, mixers, and pressure-reduction bodies in order to arrive at processes and apparatuses reading on those claimed by applicants (see the entire document).

Applicants respectfully disagree with the Examiner's contention regarding Sulzbach et al. '919. This patent fails to teach or suggest the use of a static mixer as the mixing unit. Therefore, the '919 patent can not teach or suggest that by using a static mixer in combination with a suitable pressure-reduction body which is switched downstream of the static mixer, the static mixer can be optimized with respect to mixing with no negative effect on the generation of the bubble nuclei. Thus, in the instantly claimed invention mixing and bubble nucleation can be optimized independently from each other.

Therefore, Applicants respectfully request the Examiner reconsider and reverse his rejection of Claims 1, 2 and 4-10 under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 6,019,919 issued to Sulzbach et al.

Rejections under 35 U.S.C. §102(b) as anticipated by Rill, Jr. et al.

Claim 10 stands rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 3,220,801 issued to Rill, Jr. et al. At page 3 of the instant Office Action, the Examiner states,

> Rill, Jr. et al. discloses polyurethane foam forming metering devices employing mixing elements, valves, and nozzles arranged in a manner which reads on the apparatus claimed by applicants (see the entire document).

Applicants respectfully disagree with the Examiner's contention regarding Rill, Jr. et al. That patent discloses a process and an apparatus for producing polyurethane foam in which, after the polyurethane reaction mixture has been mixed in the mixing chamber (mixing chamber 157 or mixer housing 426 or outlet connection 428 in Fig. 1), it passes directly through the pressure control valve (pressure relief valve 430 containing an inlet chamber 432 and radial passages 434 in Fig. 1) with laminar flow (col. 4, line 64 to col. 5, line 9). Atomization of the polyurethane reaction mixture at high shear rates for producing nucleation seeds is not provided, according to the teaching of Rill, Jr. et al., between the mixing chamber and the adjustable throttle body, as, according to Rill, Jr. et al., the polyurethane reaction mixture flows through the pressure control valve with laminar flow. In addition, Rill, Jr. et al. fail to teach or suggest the mixing of the reactive components in a static mixer but instead disclose the use of a stirrer-type mixer with a stirrer 264 (col. 3, lines 48-49 and Fig. 1).

Therefore, Applicants respectfully request the Examiner reconsider and reverse his rejection of Claim 10 under 35 U.S.C. §102(b), as being anticipated by U.S. Pat. No. 3,220,801 issued to Rill, Jr. et al.

Rejections under judicially created doctrine of obviousness-type double patenting

Claims 1-10 stand provisionally rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over Claims 19-36 of

copending application Serial No. 10/311,394. Claim 3 has been cancelled, thus obviating any grounds for rejection based upon that claim.

Although Applicants respectfully disagree with the Examiner's contentions regarding 10/311,394, to overcome this rejection Applicants herewith offer to submit a terminal disclaimer upon an indication of allowable subject matter.

Conclusion

Applicants have amended Claims 1 and 10; have cancelled Claim 3; and have added Claims 11-13. Such claim amendments add no new matter and find support in the specification.

Applicants submit that the instant application is in condition for allowance. Accordingly, reconsideration and a Notice of Allowance are respectfully requested for Claims 1, 2 and 4-13. If the Examiner is of the opinion that the instant application is in condition for other than allowance, he is invited to contact the Applicants' attorney at the telephone number listed below, so that additional changes to the claims may be discussed

Respectfully submitted,

By _____
John E. Mrozinski, Jr.
Attorney for Applicants
Reg. No. 46,179

Bayer MaterialScience LLC
100 Bayer Road
Pittsburgh, Pennsylvania 15205-9741
(412) 777-3024
FACSIMILE PHONE NUMBER:
(412) 777-3902
s:\shared\kgb\7786respJEM